Industrial Engineering

Indices, 1988
Volume 20

Microfilm copies of articles are available from University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106. Paper copies can also be obtained from the Publication Order Department, IIE, 25 Technology Park, Norcross, GA 30092, Phone 404/449-0460, for $4.00 each, prepaid.

Subjects (coded) and titles

0100 COSTS

0101 Budgeting

Corporate accounting practice is often barrier to implementation of computer integrated manufacturing; Bolland, Eric, Goodwin, Sally L.; July; p. 24.

Indirect costs take on greater importance, require new accounting methods with CIM; Dhavale, Dileep G.; July; p. 41.

0102 Cost controls

IEs in health care management must emphasize client-centered projects which contain cost while supporting quality; Omachonu, Vincent K., Nanda, Ravinder; October; p. 66.

Measuring nonconforming costs reduced manufacturer's cost of quality in product by $200,000; Denton, D. Keith, Kowaiski, Thomas P.; August; p. 36.

0105 Productivity

A conceptual framework for hospital nursing unit productivity measurement; Omachonu, Vincent K., Nanda, Ravinder; May; p. 56.

Ensuring financial as well as operational success of productivity improvement projects; Sourwine, Darrel A.; July; p. 34.

Henry Ford hospital IEs improve scheduling, inventory, communications; Sahney, Vinod K., Rupp, Loralee Butler; October; p. 58.

Seventh annual survey of IIE members' views on productivity contrasts with JIIE survey; Starr, Stephanie; April; p. 60.

0106 Accounting

Corporate accounting practice is often barrier to implementation of computer integrated manufacturing; Bolland, Eric, Goodwin, Sally L.; July; p. 24.

Indirect costs take on greater importance, require new accounting methods with CIM; Dhavale, Dileep G.; July; p. 41.

0200 EMPLOYEE RELATIONS

0203 Implementing change

Dow Chemical, Texas project makes continuous improvement part of every one's job; Bowman, Joseph C., Brady, Linn M.; August; p. 40.

Installation of flexible manufacturing system teaches management lessons in integration, labor, cost, benefits; Meredith, Jack; April; p. 18.

0207 Wage and salary rates

Microcomputers: sensitivity analysis offers employees a comparison of alternative retirement plans; Zanakis, Stelios, Contreras, Jose V., Zanakis, Helan, Gutman, Luisa; July; p. 20.

0300 ENGINEERING ECONOMICS

Cutting transport costs: company can save by shipping direct to consumer; Ballard, Joan McCahan, Desai, Harsha B.; May; p. 38.

0302 Equipment replacement

Old manufacturing facility sheds inefficient practices and implements structured management procedures without capital equipment expenditure; Phillips, Nicolas R.; January; p. 26.

Using simulation as tool for making financial decisions in an uncertain environment; Noble, Donald J.; January; p. 44.

Selective automation' can be profitable for small factory; Chartier, Ward, Moline, Mike; April; p. 28.

0303 Investment analysis

Microcomputers: graphic evaluation of amortization schedules; Badiru, Adedeji B.; September; p. 18.

Using simulation as a tool for making financial decisions in an uncertain environment; Noble, Donald J.; January; p. 44.

Selective automation' can be profitable for small factory; Chartier, Ward, Moline, Mike; April; p. 28.

0304 General

Hints on how to move a distribution center; Mix, Hank; May; p. 32.

Installation of flexible manufacturing system teaches management lessons in integration, labor, cost, benefits; Meredith, Jack; April; p. 18.

Selective automation' can be profitable for small factory; Chartier, Ward, Moline, Mike; April; p. 28.

0400 FACILITIES PLANNING, design

Facilities & materizl handling systems series, part 10: computer control strategy for a flexibly automated conveyor system; Sanborn, Malcolm A.; February; p. 48.

Facilities & material handling systems series, part 11: simulation and network analysis pay off in conveyor system design; Foote, Bobbie L., Ravindran, A., Badiru, Adedeji B., Leemis, Lawrence L., Williams, Larry; June; p. 48.

Facilities and material handling systems series, part 12: planning for space assignment and material flow routing in multi-level facilities; Perkins, Jerry, Graves, Robert J., Smith, J. MacGregor; August; p. 58.

Hints on how to move a distribution center; Mix, Hank; May; p. 32.

How a Kayser-Roth distribution center can increase capacity and inventory efficiency; Ntuen, Celestine A., Cornelius, Holly D., Nelson, Bill; May; p. 44.

Old manufacturing facility sheds inefficient practices and implements structured management procedures without capital equipment expenditure; Phillips, Nicolas R.; January; p. 26.

Three-level facility planning method yields management and cost benefits for FAA; Zub, Russell W., Anderson, Cynthia E.; July; p. 52.

0402 Facility location

Microcomputers: program finds new sites in multi-facility location problem; Hall, Allan E.; May; p. 71.

Three-level facility planning method yields management and cost benefit for FAA; Zub, Russell W., Anderson, Cynthia E.; July; p. 52.

0403 Office layout

A conceptual framework for hospital nursing unit productivity measurement; Omachonu, Vincent K., Nanda, Ravinder; May; p. 56.

Three-level facility planning method yields management and cost benefits for FAA; Zub, Russell W., Anderson, Cynthia E.; July; p. 52.

0404 Plant design, construction

A guide to systematic data gathering for a warehouse facility design; Elliott, Kim A.; June; p. 34.

IBM combines rapid modeling technique and simulation to design PCB factory-of-the-future; Brown, E. June; p. 22.

0019-8234/88$03.00/0

Workstation producer's new plant provides manufacturing flexibility to introduce or switch products; Holmgren, Kathleen M.; March; p. 32.

0405 Plant layout analysis

A guide to systematic data gathering for a warehouse facility design; Elliott, Kim A.; June; p. 34.

Facilities & material handling systems series, part 11: simulation and network analysis pay off in conveyor system design; Foote, Bobbie L., Ravindran, A., Badiru, Adedeji B., Leemis, Lawrence L., Williams, Larry; June; p. 48.

IBM combines rapid modeling technique and simulation to design PCB factory-of-the-future; Brown, Evelyn; June; p. 22.

Knowledge-based system for machine layout in a flexible manfacturing system; Kusiak, Andrew, Heragu, Sunderesh S.; November; p. 48.

Old manufacturing facility sheds inefficient practices and implements structured management procedures without capital equipment expenditure; Phillips, Nicolas R.; January; p. 26.

Wang scores epic' success with circuit board assembly redesign; Cross, Kelvin F.; January; p. 52.

0406 Plant layout principles

Wang scores epic' success with circuit board assembly redesign; Cross, Kelvin F.; January; p. 52.

0407 Plant layout evaluation/testing procedures

A guide to systematic data gathering or a warehouse facility design; Elliott, Kim A.; June; p. 34.

Manufacturing simulators save time, provide good data for layout evaluation; Almodovar, Angel R.; June; p. 29.

0408 Plant maintenance

Old manufacturing facility sheds inefficient practices and implements structured management procedures without capital equipment expenditure; Phillips, Nicolas R.; January; p. 26.

0500 FUNCTIONAL OPERATIONS

0501 Assembly

IBM combines rapid modeling technique and simulation to design PCB factory-of-the-future; Brown, Evelyn; June; p. 22.

IEs at CalComp are integrating JIT, TQC and employee involvement for world class manufacturing'; Barrett, Jeff,; September; p. 26.

0502 Clerical

JIT in a mail order operation reduces processing time from four days to four hours; Conant, Ronald G.; September; p. 34.

0505 Purchasing

Buyer-vendor relationships with just-in-time: lessons from U.S. multinationals; Macbeth, Douglas K., Baxter, Lynne F., Ferguson, Neil, Neil, George C.; September; p. 38.

0600 HUMAN ENGINEERING

Employees learn economics to understand their role in company's survival; Saeed, Shahab, Lindstrom, Kirk; August; p. 52.

0601 Behavioral science

Human factors are crucial component of CIM system success; Rummel, Patricia A., Holland, Thomas E. Jr.; April; p. 36.

0605 Motivation

Human factors are crucial component of CIM system success; Rummel, Patricia A., Holland, Thomas E. Jr.; April; p. 36.

Tennessee Eastman department raises quality, customer service through employee teamwork; Dingus, Victor R., Hrivnak, Dave; August; p. 28.

0608 Safety and health

Facilities & material handling systems series, part 10: computer control strategy for a flexibly automated conveyor system; Sanborn, Malcolm A.; February; p. 48.

0609 Training

Human factors are crucial component of CIM system success; Rummel, Patricia A., Holland, Thomas E. Jr.; April; p. 36.

Methods improvement kit uses IE techniques to simplify work; Copp, Ed; August; p. 47.

0700 INCENTIVE PLANS

0702 Individual

Microcomputers: sensitivity analysis offers employees a comparison of alternative retirement plans; Zanakis, Stelios, Contreras, Jose V., Zanakis, Helan, Gutman, Luisa; July; p. 20.

0703 Special types

Employees learn economics to understand their role in company's survival; Saeed, Shahab, Lindstrom, Kirk; August; p. 52.

Microcomputers: sensitivity analysis offers employees a comparison of alternative retirement plans; Zanakis, Stelios, Contreras, Jose V., Zanakis, Helan, Gutman, Luisa; July; p. 20.

0800 INDUSTRIAL ENGINEERING

IIE organization charts and honors and awards; June; p. 66.

0801 AIIE

IIE annual report for 1987-88; July; p. 65.

IIE fall conference covers business, systems integration for IEs; Coleman, Matthew; January; p. 24.

IIE headquarters staff—1988; April; p. 68.

IIE organization charts and honors and awards; June; p. 66.

Industrial engineers plan for the future at spring conference in Orlando; Coleman, Matthew; August; p. 18.

Institute Officers: 1988-1989; March; p. 58.

0808 General

IEs in health care management emphasize client-centered projects which contain cost while supporting quality; Omachonu, Vincent K., Nanda, Ravinder; October; p. 66.

IIE fall conference covers business, systems integration for IEs; Coleman, Matthew; January; p. 24.

0900 INDUSTRIES

0903 Health care and other services

Estimating projected intrafacility traffic flows at expanding medical center; Kucic, Joseph., Hunter, Bruce; October; p. 70.

Henry Ford hospital IEs improve scheduling, inventory, communications; Sahney, Vinod K., Rupp, Loralee Butler; October; p. 58.

IEs in health care management must emphasize client-centered projects which contain cost while supporting quality; Omachonu, Vincent K., Nanda, Ravinder; October; p. 66.

Making the switch from manufacturing to health care; Slipiec, Stewart; October; p. 76.

0904 Manufacturing

A flexible manufacturing cell for furniture part production; Culbreth, C. Thomas, Pollpeter, David L.; November; p. 28.

Cellular manufacturing: a good technique for implementing just-in-time and total quality control; Welke, Helmut A., Overbeeke, John; November; p. 36.

Flexible manufacturing system lets small manufacturer of mainframes compete with giants; Nagarkar, Shekhar, Bennett, David; November; p. 42.

Survey results: use of statistical process/quality control in the defense industries; ReVelle, Jack B., Harrington, Hugh Jordan; February; p. 36.

0905 Transportation, distribution

Cutting transport costs: company can save by shipping direct to consumer; Ballard, Joan McCahan, Desai, Harsha B.; May; p. 38.

How a Kayser-Roth distribution center can increase capacity and inventory efficiency; Ntuen, Celestine A., Cornelius, Holly D., Nelson, Bill; May; p. 44.

Microcomputers: technique solves transportation problem; Patel, Himanshu M.; March; p. 16.

1000 MANAGEMENT

Linking operational proposals to overall business strategy: fourteen guiding principles; Lee, David R.; August; p. 24.

Quality is exceeding customer expectations; Dingus, Victor R.; February; p. 24.

1002 Communications
Advice from consultants: how they sell their ideas and how to sell yours; King, Leslie; July; p. 44.
Dow Chemical, Texas project makes continuous improvement part of every one's job; Bowman, Joseph C., Brady, Linn M.; August; p. 40.
Selling change requires a change in selling technique-link proposals to strategy; Ayers, James B.; July; p. 28.
The evolution of a just-in-time environment at Northern Telecom Inc.'s customer service center; Savage-Moore, Wanda; September; p. 60.
1003 Decision making
Advice from consultants: how they sell their ideas and how to sell yours; King, Leslie; July; p. 44.
Artificial intelligence series, part 9: cracking researchers' monopoly on expert systems expertise; Huber, Laurence E., Huber, Rahn Carlson; January; p. 58.
Microcomputers: methodology aids forecasting with limited amounts of data; McLean, Lawrence B, Wortham, A. William; February; p. 18.
Using simulation as a tool for making financial decisions in an uncertain environment; Noble, Donald J.; January; p. 44.
1004 Information systems
Henry Ford hospital IEs improve scheduling, inventory, communications; Sahney, Vinod K., Rupp, Loralee Butler; October; p. 58.
1005 Management development
Industrial engineers at Frito-Lay follow non-traditional career with broad responsibilities; Paton, Bruce; May; p. 20.
1006 Organization
Barriers to factory automation: what are they, and how can they be surmounted?; Snyder, Kenton R., Elliott, Charles S.; April; p. 44.
1007 Project management
Advice from consultants: how they sell their ideas and how to sell yours; King, Leslie; July; p. 44.
Using a PC database for material handling project management; Davis, Darrell; December; p. 20.
1100 MATERIAL HANDLING
Facilities & material handling systems series, part 11: simulation and network analysis pay off in conveyor system design; Foote, Bobbie L., Ravindran, A., Badiru, Adedeji B., Leemis, Lawrence L., Williams, Larry; June; p. 48.
Facilities and material handling systems series, part 12: planning for space assignment and material flow routing in multi-level facilities; Perkins, Jerry, Graves, Robert J., Smith, J. MacGregor; August; p. 58.
Process control and people at general motors' delta engine plant; Blache, Klaus M., Stewart, Kenneth C., Zimmerman, Robert L., Shaull, James E., Benner, Raymond D., Humphrey, Gary P.; March; p. 24.
Using a PC database for material handling project management; Davis, Darrell; December; p. 20.
Wang scores epic' success with circuit board assembly redesign; Cross, Kelvin F.; January; p. 52.
1101 Containers, unit loads
Warehouse business system and 60 AGVs track and route products at Kodak distribution center; Lindsay, Bruce; May; p. 50.
1102 Conveyors
Facilities & material handling systems series, part 11: simulation and network analysis pay off in conveyor system design; Foote, Bobbie L., Ravindran, A., Badiru, Adedeji B., Leemis, Lawrence L., Williams, Larry; June; p. 48.
Material handling simulation minimizing bottlenecks and improving product flow using Lotus 1-2-3; Diaz, Ismael, Lezman, Steve; June; p. 40.
1006 Industrial trucks
Warehouse business system and 60 AGVs track and route products at Kodak distribution center; Lindsay, Bruce; May; p. 50.
1107 Methods and system design
Computerized storage system speeds parts delivery, increases inventory accuracy, saves money; Wenzel, Charles D.; March; p. 48.
Facilities & material handling systems series, part 10: computer control strategy for a flexibly automated conveyor system; Sanborn, Malcolm A.; February; p. 48.
Hints on how to move a distribution center; Mix, Hank; May; p. 32.
Material handling systems: planning a new material handling system; Higdon, Jim; November; p. 55.
Simplifying material handling system cuts losses due to damages 70%; Das, Priya K.; July; p. 47.
1109 Principles, analysis
Warehouse business system and 60 AGVs track and route products at Kodak distribution center; Lindsay, Bruce; May; p. 50.
1110 Receiving, shipping
Cutting transport costs: company can save by shipping direct to consumer; Ballard, Joan McCahan, Desai, Harsha B.; May; p. 38.
Hints on how to move a distribution center; Mix, Hank; May; p. 32.
How a Kayser-Roth distribution center can increase capacity and inventory efficiency; Ntuen, Celestine A., Cornelius, Holly D., Nelson, Bill; May; p. 44.
1111 Storage, warehousing
A guide to systematic data gathering for a warehouse facility design; Elliott, Kim A.; June; p. 34.
Computer voice data entry for warehouse receiving improves customer service; DeMars, Norman A., 1201; May; p. 26.
Computerized storage system speeds parts delivery, increases inventory accuracy, saves money; Wenzel, Charles D.; March; p. 48.
Hints on how to move a distribution center; Mix, Hank; May; p. 32.
How a Kayser-Roth distribution center can increase capacity and inventory efficiency; Ntuen, Celestine A., Cornelius, Holly D., Nelson, Bill; May; p. 44.
Material handling simulation minimizing bottlenecks and improving product flow using Lotus 1-2-3; Diaz, Ismael, Lezman, Steve; June; p. 40.
1112 Evaluation and selection
Simplifying material handling system cuts losses due to damages 70%; Das, Priya K.; July; p. 47.
1113 Testing procedures
Using statistical process control with robotic testing improves quality level; BenDaniel, Elisabeth; February; p. 26.
Zero defects program ensures total product quality for consumer electronics manufacturer; Roches; Larry; February; p. 32.
1114 General
How a Kayser-Roth distribution center can increase capacity and inventory efficiency; Ntuen, Celestine A., Cornelius, Holly D., Nelson, Bill; May; p. 44.
Simplifying material handling system cuts losses due to damages 70%; Das, Priya K.; July; p. 47.
Warehouse business system and 60 AGVs track and route products at Kodak distribution center; Lindsay, Bruce; May; p. 50.
1200 METHODS ENGINEERING
JIT in a mail order operation reduces processing time from four days to four hours; Conant, Ronald G.; September; p. 34.
1201 Automation, mechanization
Automated visual inspection provides needed quality control in any manufacturing environment; Foster, Joseph W., Han, Min-Hong, Griffin, Paul; October; p. 50.
Barriers to factory automation: what are they, and how can they be surmounted?; Snyder, Kenton R., Elliott, Charles S.; April; p. 44.
Computer voice data entry for warehouse receiving improves customer service; DeMars, Norman A.; May; p. 26.
Installation of flexible manufacturing system teaches management lessons in integration, labor, cost, benefits; Meredith, Jack; April; p. 18.

PC software is vital quality assurance tool at Speed Queen; Claussen, Lisa; December; p. 26.

'Selective automation' can be profitable for small factory; Chartier, Ward, Moline, Mike; April; p. 28.

1202 Computer control

Computer voice data entry for warehouse receiving improves customer service; DeMars, Norman A.; May; p. 26.

1204 Identification systems

Automated warehouse system expedites medical resupply to hospital departments; Paris, William F., III; October; p. 35.

Bar code labeling allows glove maker to improve quality control and to meet customers' special labeling demands; Murphy, Robert W., Jr.; October; p. 40.

Bar code system provides accurate work in process count; Abernathy, Howard, Holder, Benny; October; p. 34.

Bar code tracking cuts data entry at Henry Ford hospital; Abdian, Geoffrey; October; p. 43.

Computer voice data entry for warehouse receiving improves customer service; DeMars, Norman A.; May; p. 26.

IE's sixth annual automatic identification equipment buyer's guide; Nichols, Chuck; October; p. 19.

New developments in bar coding lead to greater efficiencies in the work place; Czaplicki, David J.; October; p. 12.

RF data system plays role in increasing quality at VCR plant; Brown, Evelyn; October; p. 46.

1205 Manufacturing engineering

A flexible manufacturing cell for furniture part production; Culbreth, C. Thomas, Pollpeter, David L.; November; p. 28.

A low-volume manufacturing unit realizes the advantages of FMS through innovative techniques; Adams, Nicholas; November; p. 20.

Automating tooling in a flexible manufacturing system; Kiran, Ali S., Krason, Richard J.; April; p. 52.

Cellular manufacturing: a good technique for implementing just-in-time and total quality control; Welke, Helmut A., Overbeeke, John; November; p. 36.

Corporate accounting practice is often barrier to implementation of computer integrated manufacturing; Bolland, Eric, Goodwin, Sally L.; July; p. 24.

Flexible manufacturing system lets small manufacturer of mainframes compete with giants; Nagarkar, Shekhar, Bennett, David; November; p. 42.

Indirect costs take on greater importance, require new accounting methods with CIM; Dhavale, Dileep G.; July; p. 41.

Microcomputers: cluster analysis for group technology; Chow, Wing S., Kusiak, Andrew; April; p. 70.

Microcomputers: performance evaluation for machines in blocking series; Noh, Yongdeok, Herring, Bruce; November; p. 12.

Simulation model developed to convert production to cellular manufacturing layout; Harshell, Jim, Dahl, Susan; December; p. 40.

Workstation producer's new plant provides manufacturing flexibility to introduce or switch products; Holmgren, Kathleen M.; March; p. 32.

1209 Process design

Microcomputers: cluster analysis for group technology; Chow, Wing S., Kusiak, Andrew; April; p. 70.

1211 Value analysis, engineering

Corporate accounting practice is often barrier to implementation of computer integrated manufacturing; Bolland, Eric, Goodwin, Sally L.; July; p. 24.

Indirect costs take on greater importance, require new accounting methods with CIM; Dhavale, Dileep G.; July; p. 41.

Selling change requires a change in selling technique-link proposals to strategy; Ayers, James B.; July; p. 28.

1213 Work design, methods improvement

Barriers to factory automation: what are they, and how can they be surmounted?; Snyder, Kenton R., Elliott, Charles S.; April; p. 44.

Ensuring financial as well as operational success of productivity improvement projects; Sourwine, Darrel A.; July; p. 34.

Methods improvement kit uses IE techniques to simplify work; Copp, Ed; August; p. 47.

Selling change requires a change in selling technique-link proposals to strategy; Ayers, James B.; July; p. 28.

1214 Work analysis techniques

Ensuring financial as well as operational success of productivity improvement projects; Sourwine, Darrel A.; July; p. 34.

1300 QUANTITIVE METHODS

Using statistical process control with robotic testing improves quality level; BenDaniel, Elisabeth; February; p. 26.

1301 Mathematical models

Artificial intelligence series, part 9: cracking researchers' monopoly on expert systems expertise; Huber, Laurence E., Huber, Rahn Carlson; January; p. 58.

Estimating projected intrafacility traffic flows at expanding medical center; Kucic, Joseph, Hunter, Bruce; October; p. 70.

How a Kayser-Roth distribution center can increase capacity and inventory efficiency; Ntuen, Celestine A., Cornelius, Holly D., Nelson, Bill; May; p. 44.

Indirect costs take on greater importance, require new accounting methods with CIM; Dhavale, Dileep G.; July; p. 41.

Lotus 1-2-3 can produce dynamic graphic simulation without stops in the program; Godin, Victor B., Rao, Ashok; March; p. 42.

Microcomputers: cluster analysis for group technology; Chow, Wing S., Kusiak, Andrew; April; p. 70.

Microcomputers: performance evaluation for machines in blocking series; Noh, Yongdeok, Herring, Bruce; November; p. 12.

Microcomputers: program finds new sites in multi-facility location problem; Hall, Allan E.; May; p. 71.

Microcomputers: technique solves transporation problem; Patel, Himanshu M.; March; p. 16.

1302 Networks

Microcomputers: methodology aids forcasting with limited amounts of data; McLean, Lawrence B, Wortham, A. William; February; p. 18.

1303 Programming: linear, nonlinear

Lotus 1-2-3 can produce dynamic graphic simulation without stops in the program; Godin, Victor B., Rao, Ashok; March; p. 42.

Material handling simulation minimizing bottlenecks and improving product flow using Lotus 1-2-3; Diaz, Ismael, Lezman, Steve; June; p. 40.

Microcomputers: Two job, m-machine sequencing analysis; Woollam, C.R.; January; p. 19.

Microcomputers: program finds new sites in multi-facility location problem; Hall, Allan E.; May; p. 71.

Microcomputers: sensitivity analysis offers employees a comparison of alternative retirement plans; Zanakis, Stelios, Contreras, Jose V., Zanakis, Helan, Gutman, Luisa; July; p. 20.

Microcomputers: technique solves transportation problem; Patel, Himanshu M.; March; p. 16.

1305 Simulation/games

Artificial intelligence series, part 9: cracking researchers' monopoly on expert systems expertise; Huber, Laurence E., Huber, Rahn Carlson; January; p. 58.

How a Kayser-Roth distribution center can increase capacity and inventory efficiency; Ntuen, Celestine A., Cornelius, Holly D., Nelson, Bill; May; p. 44.

IBM combines rapid modeling technique and simulation to design PCB factory-of-the-future; Brown, Evelyn; June; p. 22.

Lotus 1-2-3 can produce dynamic graphic simulation without stops in the program; Godin, Victor B., Rao, Ashok; March; p. 42.

Manufacturing simulators save time, provide good data for layout evaluation; Almodovar, Angel R.; June; p. 29.

Material handling simulation minimizing bottlenecks and improving product flow using Lotus 1-2-3; Díaz, Ismael, Lezman, Steve; June; p. 40.

Material handling systems: planning a new material handling system; Higdon, Jim; November; p. 55.

Microcomputers: Two job, m-machine sequencing analysis; Woollam, C.R.; January; p. 19.

Microcomputers: technique solves transportation problem; Patel, Himanshu M.; March; p. 16.

Simulation model developed to convert production to cellular manufacturing layout; Harshell, Jim, Dahl, Susan; December; p. 40.

Using simulation as a tool for making financial decisions in an uncertain environment; Noble, Donald J.; January; p. 44.

Warehouse business system and 60 AGVs track and route products at Kodak distribution center; Lindsay, Bruce; May; p. 50.

1400 PRODUCTION AND INVENTORY CONTROL

IEs at CalComp are integrating JIT, TQC and employee involvement for world class manufacturing'; Barrett, Jeff,; September; p. 26.

Implementing JIT with MRP II creates hybrid manufacturing environment; Bose, Gerald J., Rao, Ashok; September; p. 49.

Managing production for customer service and plant efficiency; Eloranta, Eero; March; p. 36.

Misconceptions abound concerning just-in-time operating philosophy; Bockerstette, Joseph A.; September; p. 54.

The evolution of a just-in-time environment at Northern Telecom Inc.'s customer service center; Savage-Moore, Wanda; September; p. 60.

Wang scores 'epic' success with circuit board assembly redesign; Cross, Kelvin F.; January; p. 52.

1401 Distribution systems

Distribution resource planning: communicating time-phased requirements to suppliers significantly reduces cost, changes business methods; Martin, Andre; November; p. 60.

1403 Inventory control

Automated warehouse system expedites medical resupply to hospital departments; Paris, William F., III; October; p. 35.

Bar code labeling allows glove maker to improve quality control and to meet customers' special labeling demands; Murphy, Robert W., Jr.; October; p. 40.

Bar code system provides accurate work in process count; Abnernathy, Howard, Holder, Benny; October; p. 34.

Bar code tracking cuts data entry at Henry Ford hospital; Abdian, Geoffrey; October; p. 43.

RF data system plays role in increasing quality at VCR plant; Brown, Evelyn; October; p. 46.

1404 Materials management

Buyer-vendor relationships with just-in-time: lessons from U.S. multinationals; Macbeth, Douglas K., Baxter, Lynne F., Ferguson, Neil, Neil, George C.; September; p. 38.

Distribution resource planning: communicating time-phased requirements to suppliers significantly reduces cost, changes business methods; Martin, Andre; November; p. 60.

JIT/TQC: integrating product design with shop floor effectiveness; Hohner, Gregory; September; p. 42.

1405 Production control

Automating tooling in a flexible manufacturing system; Kiran, Ali S., Krason, Richard J.; April; p. 52.

Making production scheduling more efficient helps control manufacturing costs and improve productivity; Grant, Hank, Clapp, Christopher; June; p. 54.

Workflow anlaysis, just-in-time techniques simplify administrative process in paperwork operation; Cross, Kelvin F., Feather, John J.; January; p. 32.

Workstation producer's new plant provides manufacturing flexibility to introduce or switch products; Holmgren, Kathleen M.; March; p. 32.

1406 Production planning

Facilities & material handling systems series. part 10: computer control strategy for a flexibly automated conveyor system; Sanborn, Malcolm A.; February; p. 48.

Making production scheduling more efficient helps control manufacturing costs and improve productivity; Grant, Hank, Clapp, Christopher; June; p. 54.

Microcomputers: Two job, m-machine sequencing analysis; Woollam, C.R.; January; p. 19.

1407 Production scheduling

Making production scheduling more efficient helps control manufacturing costs and improve productivity; Grant, Hank, Clapp, Christopher; June; p. 54.

1500 QUALITY CONTROL

Process control and people at general motors' delta engine plant; Blache, Klaus M., Stewart, Kenneth C., Zimmerman, Robert L., Shaull, James E., Benner, Raymond D., Humphrey, Gary P.; March; p. 24.

Quality assurance can be managed effectively as a distributed function; Thompson, Bruce A.; February; p. 42.

Quality is exceeding customer expectations; Dingus, Victor R.; February; p. 24.

Survey results: use of statistical process/quality control in the defense industries; ReVelle, Jack B., Harrington, Hugh Jordan; February; p. 36.

Using statistical process control with robotic testing improves quality level; BenDaniel, Elisabeth; February; p. 26.

Zero defects program ensures total product quality for consumer electronics manufacturer; Roches, Larry; February; p. 32.

1501 Inspection

Quality assurance can be managed effectively as a distributed function; Thompson, Bruce A.; February; p. 42.

Survey results: use of statistical process/quality control in the defense industries; ReVelle, Jack B., Harrington, Hugh Jordan; February; p. 36.

Using statistical process control with robotic testing improves quality level; BenDaniel, Elisabeth; February; p. 26.

Zero defects program ensures total product quality for consumer electronics manufacturer; Roches, Larry; February; p. 32.

1502 Quality control

Automated visual inspection provides needed quality control in any manufacturing environment; Foster, Joseph W., Han, Min-Hong, Griffin, Paul; October; p. 50.

Automated warehouse system expedites medical resupply to hospital departments; Paris, William F., III; October; p. 35.

Bar code labeling allows glove maker to improve quality control and to meet customers' special labeling demands; Murphy, Robert W., Jr.; October; p. 40.

Bar code system provides accurate work in process count; Abernathy, Howard, Holder, Benny; October; p. 34.

Bar code tracking cuts data entry at Henry Ford hospital; Abdian, Geoffrey; October; p. 43.

JIT/TQC: integrating product design with shop floor effectiveness; Hohner, Gregory; September; p. 42.

Measuring nonconforming costs reduced manufacturer's cost of quality in product by $200,000; Denton, D. Keith, Kowaiski, Thomas P.; August; p. 36.

PC software is vital quality assurance tool at Speed Queen; Claussen, Lisa; December; p. 26.

Quality assurance can be managed effectively as a distributed function; Thompson, Bruce A.; February; p. 42.

RF data system plays role in increasing quality at VCR plant; Brown, Evelyn; October; p. 46.

Simplifying material handling system cuts losses due to damages 70%; Das, Priya K.; July; p. 47.

Survey results: use of statistical process/quality control in the defense industries; ReVelle, Jack B., Harrington, Hugh Jordan; February; p. 36.

Tennessee Eastman department raises quality, customer service through employee teamwork; Dingus, Victor R., Hrivnak,

Dave; August; p. 28.
Zero defects program ensures total product quality for consumer electronics manufacturer; Roches, Larry; February; p. 32.
Selective automation' can be profitable for small factory; Chartier, Ward, Moline, Mike; April; p. 28.

1503 Reliability

Quality assurance can be managed effectively as a distributed function; Thompson, Bruce A.; February; p. 42.
Survey results: use of statistical process/quality control in the defense industries; ReVelle, Jack B., Harrington, Hugh Jordan; February; p. 36.
Zero defects program ensures total product quali'y for consumer electronics manufacturer; Roches, Larry; February; p. 32.

1504 Sampling

Quality assurance can be managed effectively as a distributed function; Thompson, Bruce A.; February; p. 42.
Survey results: use of statistical process/quality control in the defense industries; ReVelle, Jack B., Harrington, Hugh Jordan; February; p. 36.
Using statistical process control with robotic testing improves quality level; BenDaniel, Elisabeth; February; p. 26.
Zero defects program ensures total product quality for consumer electronics manufacturer; Roches, Larry; February; p. 32.

1600 WORK MEASUREMENT

Workflow analysis, just-in-time techniques simplify administrative process in paperwork operation; Cross, Kelvin F., Feather, John J.; January; p. 32.

1610 Work sampling

Workflow analysis, just-in-time techniques simplify administrative process in paperwork operation; Cross, Kelvin F., Feather, John J.; January; p. 32.

1611 General

Workflow analysis, just-in-time techniques simplify administrative process in paperwork operation; Cross, Kelvin F., Feather, John J.; January; p. 32.

1700 DATA PROCESSING SYSTEMS DESIGN

1701 Digital computers

Microcomputers: program finds new sites in multi-facility location problem; Hall, Allan E.; May; p. 71.

1703 Analysis techniques

Artificial intelligence series, part 9: cracking researchers' monopoly on expert systems expertise; Huber, Laurence E., Huber, Rahn Carlson; January; p. 58.
Guidelines for developing PC applications; Alloway, James A. Jr.; December, p. 20.
Lotus 1-2-3 can produce dynamic graphic simulation without stops in the program; Godin, Victor B., Rao, Ashok; March; p. 42.

1705 General

Microcomputers: Lotus 1-2-3-model generates normal random numbers; Lee, Patrick; December; p. 16.
Microcomputers: program prints labels for smooth manufacturing; Fulmer, Murray; October; p. 78.
Using a computer to estimate products which vary in quantity; Ostwald, Phillip F., P.E., Funk, Jeffrey; December; p. 36.

Authors

Abdian, Geoffrey; Bar code tracking cuts data entry at Henry Ford hospital; October; p.43.
Abernathy, Howard, Holder, Benny; Bar code system provides accurate work in process count; October; p.34.
Adams, Nicholas; A low-volume manufacturing unit realizes the advantages of FMS through innovative techniques; November; p.20.
Alloway, James A. Jr.; Guidelines for developing PC applications; December; p. 20.
Almodovar, Angel R.; Manufacturing simulators save time, provide good data for layout evaluation; June; p.29.
Anderson, Cynthia E., Zub, Russell W.; Three-level facility planning method yields management and cost benefits for FAA; July; p.52.
Ayers, James B.; Selling change requires a change in selling technique-link proposals to strategy; July; p.28.
Badiru, Adedeji B., Foote, Bobbie L., Ravindran, A., Leemis, Lawrence L., Williams, Larry; Facilities & material handling systems series, part 11: simulation and network analysis pay off in conveyor system design; June; p.48.
Badiru, Adedeji B.; Microcomputers: graphic evaluation of amortization schedules; September; p.18.
Ballard, Joan McCahan, Desai, Harsha B.; Cutting transport costs: company can save by shipping direct to consumer; May; p.38.
Barrett, Jeff; IEs at CalComp are integrating JIT, TQC and employee involvement for world class manufacturing'; September; p.26.
Baxter, Lynne F., Macbeth, Douglas K., Ferguson, Neil, Neil, George C.; Buyer-vendor relationships with just-in-time: lessons from U.S. multinationals; September; p.38.
BenDaniel, Elisabeth; Using statistical process control with robotic testing improves quality level; February; p.26.
Benner, Raymond D., Blache, Klaus M., Stewart, Kenneth C., Zimmerman, Robert L., Shaull, James E., Humphrey, Gary P.; Process control and people at general motors' delta engine plant; March; p.24.
Bennett, David, Nagarkar, Shekhar; Flexible manufacturing system lets small manufacturer of mainframes compete with giants; November; p.42.
Blache, Klaus M., Stewart Kenneth C., Zimmerman, Robert L., Shaull, James E., Benner, Raymond D., Humphrey, Gary P.; Process control and people at general motors' delta engine plant; March; p.24.
Bockerstette, Joseph A.; Misconceptions abound concerning just-in-time operating philosophy; September; p.54.
Bolland, Eric, Goodwin, Sally L.; Corporate accounting practice is often barrier to implementation of computer integrated manufacturing; July; p.24.
Bose, Gerald J., Rao, Ashok; Implementing JIT with MRP II creates hybrid manufacturing environment; September; p.49.
Bowman, Joseph C., Brady, Linn M.; Dow Chemical, Texas project makes continuous improvement part of every one's job; August; p.40.
Brady, Linn M., Bowman, Joseph C.; Dow Chemical, Texas project makes continuous improvement part of every one's job; August; p.40.
Brown, Evelyn; RF data system plays role in increasing quality at VCR plant; October; p.46.
Brown, Evelyn; IBM combines rapid modeling technique and simulation to design PCB factory-of-the-future; June; p.22.
Chartier, Ward, Moline, Mike; Selective automation' can be profitable for small factory; April; p.28.
Chow, Wing S., Kusiak, Andrew; Microcomputers: cluster analysis for group technology; April; p.70.
Clapp, Christopher, Grant, Hank; Making production scheduling more efficient helps control manufacturing costs and improve productivity; June; p.54.
Claussen, Lisa; PC software is vital quality assurance tool at Speed Queen; December; p. 26.
Coleman, Matthew; IIE fall conference covers business, systems integration for IEs; January; p.24.
Coleman, Matthew; Industrial engineers plan for the future at Spring Conference in Orlando; August; p.18.
Conant, R. G., JIT in a mail order operation reduces processing time from four days to four hours; September; p.34.

Contreras, Jose V., Zanakis, Stelios, Zanakis, Helan, Gutman, Luisa; Microcomputers: sensitivity analysis offers employees a comparison of alternative retirement plans; July; p.20.
Copp, Ed; Methods improvement kit uses IE techniques to simplify work; August; p.47.
Cornelius, Holly D., Ntuen, Celestine A., Nelson, Bill; How a Kayser-Roth distribution center can increase capacity and inventory efficiency; May; p.44.
Cross, Kelvin F., Feather, John J.; Workflow analysis, just-in-time techniques simplify administrative process in paperwork operation; January; p.32.
Cross, Kelvin F.; Wang scores 'epic' success with circuit board assembly redesign; January; p.52.
Culbreth, C. Thomas, Pollpeter, David L.; A flexible manufacturing cell for furniture part production; November; p.28.
Czaplicki, David J.; New developments in bar coding lead to greater efficiencies in the work place; October; p.12.
Dahl, S., Harshell, J.; Simulation model developed to convert production to cellular manufacturing layout; December; p. 40.
Das, Priya K.; Simplifying material handling system cuts losses due to damages 70%; July; p.47.
Davis, Darrell; Using a PC database for material handling project management; December; p. 32.
DeMars, Norman A.; Computer voice data entry for warehouse receiving improves customer service; May; p.26.
Denton, D. Keith, Kowaiski, Thomas P.; Measuring nonconforming costs reduced manufacturer's cost of quality in product by $200,000; August; p.36.
Desai, Harsha B., Ballard, Joan McCahan; Cutting transport costs: company can save by shipping direct to consumer; May; p.38.
Dhavale, Dileep G.; Indirect costs take on greater importance, require new accounting methods with CIM; July; p.41.
Diaz, Ismael, Lezman, Steve; Material handling simulation minimizing bottlenecks and improving product flow using Lotus 1-2-3; June; p.40.
Dingus, Victor R., Hrivnak, Dave; Tennessee Eastman department raises quality, customer service through employee teamwork; August; p.28.
Dingus, Victor R.; Quality is exceeding customer expectations; February; p.24.
Elliott, Charles S., Snyder, Kenton R.; Barriers to factory automation: what are they, and how can they be surmounted?; April; p.44.
Elliott, Kim A.; A guide to systematic data gathering for a warehouse facility design; June; p.34.
Eloranta, Eero; Managing production for customer service and plant efficiency; March; p.36.
Feather, John J., Cross, Kelvin F.; Workflow analysis, just-in-time techniques simplify administrative process in paperwork operation; January; p.32.
Ferguson, Neil, Macbeth, Douglas K., Baxter, Lynne F., Neil, George C.; Buyer-vendor relationships with just-in-time: lessons from U.S. multinationals; September; p.38.
Foote, Bobbie L., Ravindran, A., Badiru, Adedeji B., Leemis, Lawrence L., Williams, Larry; Facilities & material handling systems series, part 11: simulation and network analysis pay off in conveyor system design; June; p.48.
Foster, Joseph W., Han, Min-Hong, Griffin, Paul; Automated visual inspection provides needed quality control in any manufacturing environment; October; p.50.
Fulmer, Murray; Microcomputers: program prints labels for smooth manufacturing; October; p.78.
Funk, J., Ostwald, P.F.; Using a computer to estimate products which vary in quantity; December; p. 36.
Godin, Victor B., Rao, Ashok; Lotus 1-2-3 can produce dynamic graphic simulation without stops in the program; March; p.42.
Goodwin, Sally L., Bolland, Eric; Corporate accounting practice is often barrier to implementation of computer integrated manufacturing; July; p.24.
Grant, Hank, Clapp, Christopher; Making production scheduling more efficient helps control manufacturing costs and improve productivity; June; p.54.
Graves, Robert J., Perkins, Jerry, Smith, J. MacGregor; Facilities and material handling systems series, part 12: planning for space assignment and material flow routing in mutli-level facilities; August; p.58.
Griffin, Paul, Foster, Joseph W., Han, Min-Hong; Automated visual inspection provides needed quality control in any manufacturing environment; October; p.50.
Gutman, Luisa, Zanakis, Stelios, Contreras, Jose V., Zanakis, Helan; Microcomputers: sensitivity analysis offers employees a comparison of alternative retirement plans; July; p.20.
Hall, Allan E.; Microcomputers: program finds new sites in multi-facility location problem; May; p.71.
Han, Min-Hong, Foster, Joseph W., Griffin, Paul; Automated visual inspection provides needed quality control in any manufacturing environment; October; p.50.
Harrington, Hugh Jordan, ReVelle, Jack B.; Survey results: use of statistical process/quality control in the defense industries; February; p.36.
Harshell, J., Dahl, S.; Simulation model developed to convert production to cellular manufacturing layout; December; p. 40.
Heragu, Sunderesh S., Kusiak, Andrew; Knowledge-based system for machine layout in a flexible manufacturing system; November; p.48.
Herring, Bruce, Noh, Yongdeok; Microcomputers: performance evaluation for machines in blocking series November; p.12.
Higdon, Jim; Material handling systems: planning a new material handling system; November; p.55.
Hohner, Gregory; JIT/TQC: integrating product design with shop floor effectiveness; September; p.42.
Holder, Benny, Abernathy, Howard; Bar code system provides accurate work in process count; October; p.34.
Holland, Thomas E. Jr., Rummel, Patricia A.; Human factors are crucial component of CIM system success; April; p.36.
Holmgren, Kathleen M.; Workstation producer's new plant provides manufacturing flexibility to introduce or switch products; March; p.32.
Hrivnak, Dave, Dingus, Victor R.; Tennessee Eastman department raises quality, customer service through employee teamwork; August; p.28.
Huber, Laurence E., Huber, Rahn Carlson; Artificial intelligence series, part 9: cracking researchers' monopoly on expert systems expertise; January; p.58.
Huber, Rahn Carlson, Huber, Laurence E.; Artificial intelligence series, part 9: cracking researchers' monopoly on expert systems expertise; January; p.58.
Humphrey, Gary P., Blache, Klaus M., Stewart, Kenneth C., Zimmerman, Robert L., Shaull, James E., Benner, Raymond D.; Process control and people at general motors' delta engine plant; March; p.24.
Hunter, Bruce, Kucic, Joseph; Estimating projected intrafacility traffic flows at expanding medical center; October; p.70.
King, Leslie; Advice from consultants: how they sell their ideas and how to sell yours; July; p.44.
Kiran, Ali S., Krason, Richard J.; Automating tooling in a flexible manufacturing system; April; p.52.
Kowaiski, Thomas P., Denton, D. Keith; Measuring nonconforming costs reduced manufacturer's cost of quality in product by $200,000; August; p.36.
Krason, Richard J., Kiran, Ali S.; Automating tooling in a flexible manufacturing system; April; p.52.
Kucic, Joseph, Hunter, Bruce; Estimating projected intrafacility traffic flows at expanding medical center; October; p.70.
Kusiak, Andrew, Chow, Wing S.; Microcomputers: cluster analysis for group technology; April; p.70.
Kusiak, Andrew, Heragu, Sunderesh S.; Knowledge-based system for machine layout in a flexible manufacturing

system; November; p.48.
Lee, David R.; Linking operational proposals to overall business strategy: fourteen guiding principles; August; p.24.
Lee, Patrick; Microcomputers: Lotus 1-2-3 model generates normal random numbers; December; p. 16.
Leemis, Lawrence L., Foote, Bobbie L., Ravindran, A., Badiru, Adedeji B., Williams, Larry; Facilities & material handling systems series, part 11: simulation and network analysis pay off in conveyor system design; June; p.48.
Lezman, Steve, Diaz, Ismael; Material handling simulation minimizing bottlenecks and improving product flow using Lotus 1-2-3; June; p.40.
Lindsay, Bruce; Warehouse business system and 60 AGVs track and route products at Kodak distribution center; May; p.50.
Lindstrom, Kirk, Saeed, Shahab; Employees learn economics to understand their role in company's survival; August; p.52.
MacBeth, Douglas K., Baxter, Lynne F., Ferguson, Neil, Neil, George C.; Buyer-vendor relationships with just-in-time: lessons from U.S. multinationals; September; p.38.
Martin, Andre; Distribution resource planning: communicating time-phased requirements to suppliers significantly reduces cost, changes business methods; November; p.60.
McLean, Lawrence B, Wortham, A. William; Microcomputers: methodology aids forecasting with limited amounts of data; February; p.18.
Meredith, Jack; Installation of flexible manufacturing system teaches management lessons in integration, labor, cost, benefits; April; p.18.
Mix, Hank; Hints on how to move a distribution center; May; p.32.
Moline, Mike, Chartier, Ward; Selective automation' can be profitable for small factory; April; p.28.
Murphy, Robert W., Jr.; Bar code labeling allows glove maker to improve quality control and to meet customers' special labeling demands; October; p.40.
Nagarkar, Shekhar, Bennett, David; Flexible manufacturing system lets small manufacturer of mainframes compete with giants; November; p.42.
Nanda, Ravinder, Omachonu, Vincent K.; A conceptual framework for hospital nursing unit productivity measurement; May; p.56.
Nanda, Ravinder, Omachonu, Vincent K.; IEs in health care menagement must emphasize client-centered projects which contain cost while supporting quality; October; p.66.
Neil, George C., Macbeth, Douglas K., Baxter, Lynne F., Ferguson, Neil; Buyer-vendor relationships with just-in-time: lessons from U.S. multinationals; September; p.38.
Nelson, Bill, Ntuen, Celestine A., Cornelius, Holly D.; How a Kayser-Roth distribution center can increase capacity and inventory efficiency; May; p.44.
Nichols, Chuck; IE's sixth annual automatic identification equipment buyer's guide; October; p.19.
Noble, Donald J.; Using simulation as a tool for making financial decisions in an uncertain environment; January; p.44.
Noh, Yongdeok, Herring, Bruce; Microcomputers: performance evaluation for machines in blocking series; November; p.12.
Ntuen, Celestine A., Cornelius, Holly D., Nelson, Bill; How a Kayser-Roth distribution center can increase capacity and inventory efficiency; May; p.44.
Omachonu, Vincent K., Nanda, Ravinder; IEs in health care management must emphasize client-centered projects which contain cost while supporting quality; October; p.66.
Omachonu, Vincent K., Nanda, Ravinder; A conceptual framework for hospital nursing unit productivity measurement; May; p.56.
Ostwald, P.F., Funk, J.; Using a computer to estimate products which vary in quantity; December; p. 36.
Overbeeke, John, Welke, Helmut A.; Cellular manufacturing: a good technique for implementing just-in-time and total quality control; November; p.36.
Paris, William F., III; Automated warehouse system expedites medical resupply to hospital departments; October; p.35.
Patel, Himanshu M.; Microcomputers: technique solves transportation problem; March; p.16.
Paton, Bruce; Industrial engineers at Frito-Lay follow nontraditional career with broad responsibilities; May; p.20.
Perkins, Jerry, Graves, Robert J., Smith, J. MacGregor; Facilities and material handling systems series, part 12: planning for space assignment and material flow routing in multi-level facilities; August; p.58.
Phillips, Nicolas R.; Old manufacturing facility sheds inefficient practices and implements structured management procedures without capital equipment expenditure; January; p.26.
Pollpeter, David L., Culbreth, C. Thomas; A flexible manufacturing cell for furniture part production; November; p.28.
Rao, Ashok, Godin, Victor B.; Lotus 1-2-3 can produce dynamic graphic simulation without stops in the program; March; p.42.
Rao, Ashok, Bose, Gerald J.; Implementing JIT with MRP II creates hybrid manufacturing environment; September; p.49.
Ravindran, A., Foote, Bobbie L., Badiru, Abedeji B., Leemis, Lawrence L., Williams, Larry; Facilities & material handling systems series, part 11: simulation and network analysis pay off in conveyor system design; June; p.48.
ReVelle, Jack B., Harrington, Hugh Jordan; Survey results: use of statistical process/quality control in the defense industries; February; p.36.
Roches, Larry; Zero defects program ensures total product quality for consumer electronics manufacturer; February; p.32.
Rummel, Patricia A., Holland, Thomas E. Jr.; Human factors are crucial component of CIM system success; April; p.36.
Rupp, Loralee Butler, Sahney, Vinod K.; Henry Ford hospital IEs improve scheduling, inventory, communications; October; p.58.
Saeed, Shahab, Lindstrom, Kirk; Employees learn economics to understand their role in company's survival; August; p.52.
Sahney, Vinod K., Rupp, Loralee Butler; Henry Ford hospital IEs improve scheduling, inventory, communications; October; p.58.
Sanborn, Malcolm A.; Facilities & material handling systems series, part 10: computer control strategy for a flexibly automated conveyor system; February; p.48.
Savage-Moore, Wanda; The evolution of a just-in-time environment at Northern Telecom Inc.'s customer service center; September; p.60.
Shaull, James E., Blache, Klaus M., Stewart, Kenneth C., Zimmerman, Robert L., Benner, Raymond D., Humphrey, Gary P.; Process control and people at general motors' delta engine plant; March; p.24.
Slipiec, Stewart; Making the switch from manufacturing to health care; October; p.76.
Smith, J. MacGregor, Perkins, Jerry, Graves, Robert J.; Facilities and material handling systems series, part 12: planning for space assignment and material flow routing in multi-level facilities; August; p.58.
Snyder, Kenton R., Elliott, Charles S.; Barriers to factory automation: what are they, and how can they be surmounted?; April; p.44.
Sourwine, Darrel A.; Ensuring financial as well as operational success of productivity improvement projects; July; p.34.
Starr, Stephanie; Seventh annual survey of IIE members' views on productivity contrasts with JIIE survey; April; p.60.
Stewart, Kenneth C., Blache, Klaus M., Zimmerman, Robert L., Shaull, James E., Benner, Raymond D., Humphrey, Gary P.; Process control and people at general motors' delta engine plant; March; p.24.
Thompson, Bruce A.; Quality assurance can be managed effectively as a distributed function; February; p.42.

Welke, Helmut A., Overbeeke, John; Cellular manufacturing: a good technique for implementing just-in-time and total quality control; November; p.36.

Wenzel, Charles D.; Computerized storage system speeds parts delivery, increases inventory accuracy, saves money; March; p.48.

Williams, Larry, Foote, Bobbie L., Ravindran, A., Badiru, Adedeji B., Leemis, Lawrence L.; Facilities & material handling systems series, part 11: simulation and network analysis pay off in conveyor system design; June; p.48.

Woollam, C.R.; Microcomputers: Two job, m-machine sequencing analysis; January; p.19.

Wortham, A. William, McLean, Lawrence B; Microcomputers: methodology aids forecasting with limited amounts of data; February; p.18.

Zanakis, Helan, Zanakis, Stelios, Contreras, Jose V., Gutman, Luisa; Microcomputers: sensitivity analysis offers employees a comparison of alternative retirement plans; July; p.20.

Zanakis, Stelios, Contreras, Jose V., Zanakis, Helan, Gutman, Luisa; Microcomputers: sensitivity analysis offers employees a comparison of alternative retirement plans; July; p.20;

Zimmerman, Robert L., Blache, Klaus M., Stewart, Kenneth C., Shaull, James E., Benner, Raymond D., Humphrey, Gary P.; Process control and people at general motors' delta engine plant; March; p.24.

Zub, Russell W., Anderson, Cynthia E.; Three-level facility planning method yields management and cost benefits for FAA; July; p.52.

Proceedings: 1988 International Industrial Engineering Conference

Orlando, FL, May 22-25, 1988

Subjects (coded) and titles

0100 COSTS

Hospital business office and admitting—centralization or not?; Ferrin, David M., McDermott, Richard, Cluff, Ben; p. 479.

0102 Cost controls

Understanding your volume/variety cost structure; Mather, Hal; p. 397.

0104 Cost reduction programs

Cost-effective use of government resources and private contractors in maintenance projects; Garcia-Diaz, Alberto, Cediel-Franco, Fernando; p. 217.

Energy management at Walt Disney World; Allen, Paul J.; p. 77.

Work sampling proves useful in quality cost measurement; Batson, Robert G.; p. 373.

0105 Productivity

An analysis of improshare; Parsons, Robert, Globerson, Shlomo; p. 267.

Assuring success of improshare; Fein, Mitchell; p. 260.

Catalytic effects of a productivity enhancement project office; Garcia, David J., Davidson, Joel; p. 222.

Effects of assigning progressively harder production standards with feedback on worker productivity in a repetitive manufacturing task; Das, Biman, Shikdar, Ashraf A.; p. 121.

Goal setting—key to personal productivity improvement; Peters, Ralph W.; p. 280.

Improving productivity and quality at the source; Edosomwan, Johnson A.; p. 62.

Multifactor productivity measurement at the plant level; Aldrich, David W.; p. 294.

Productivity and quality in the branch of the future; Shurig, Thomas J., McDonell, Edwin D., Hill, Arthur V., Albers, John E., p. 197.

0200 EMPLOYEE RELATIONS

0203 Implementing change

An analysis of improshare; Parsons, Robert, Globerson, Shlomo; p. 267.

Production improvement: the shared responsibility of worker and manager; Cox, John Lew, Hyder, Debra A.; p. 243.

0300 ENGINEERING ECONOMICS

The impact of the 1986 tax reform act on after-tax cash flow analysis; Smith, Donald R.; p. 297.

0301 Cash flow analysis

Microcomputer software to support non-traditional economic analyses; Hodge, George L., Canada, John R.; p. 89.

0302 Equipment replacement

A practical approach to multi-machine replacement decisions; Leung, Lawrence C., Irani, S.A.; p. 489.

0304 General

Economic analysis in the context of incomplete knowledge; Lee, Ted S.; p. 95.

0400 FACILITIES PLANNING, DESIGN

0402 Facility location

Site selection to minimize fuel handling and transportation costs; West, Thomas M., Randhawa, Sabah U., Mills, Nancy L.; p. 533.

0405 Plant layout analysis

Knowledge preanalysis for manufacturing systems layout; Montreuil, Benoit, Stump, Daniel J.; p. 180.

0407 Plant layout evaluation/testing procedures

Knowledge based system for machine layout (KBML); Kusiak, Andrew, Heragu, Sunderesh; p. 159.

0408 Plant maintenance

Total productive maintenance: a team implementation approach; Moss, Douglas W., Maggard, Bill N., Bailey, Charles L.; p. 383.

0500 FUNCTIONAL OPERATIONS

0501 Assembly

A hierarchical system for scheduling and near real-time control of material flow in flexible assembly; Graves, Robert J., p. 147.

How to guarantee CIM project management success; Smith, Dale A.; p. 6.

Optimal selection of operators for assembly line work stations; Hosein, Robert W.; p. 132.

0504 Maintenance, plant engineering

Cost-effective use of government resources and private contractors in maintenance projects; Garcia-Diaz, Alberto, Cediel-Franco, Fernando; p. 217.

Maintenance patterns evaluation for electric plant equipment and facilities; Singh, Brij B.; p. 543.

0600 HUMAN ENGINEERING

0603 Ergonomics

Effective ways to screen and match workers for physically demanding jobs; Mital, Anil, Genaidy, Ashraf M., Asfour, S.S.; p. 109.

Ergonomic considerations of predetermined motion time systems; Genaidy, Ashraf M., Bafna, K.M., Khalil, T.M., Asfour, S.S., Zandin, K.; p. 584.

Industrial lighting economics of retrofit options; Mallik, Arup K., Singh, Harmohindar, Kramer, Donna K.; p. 80.

Reduced temperatures and MTM assembly time; Chang, Jason C., Riley, Michael W., Cochran, David J.; p. 126.

Worker creativity: an "environmental" issue for management; Dean, Robert S., Swoyer, Samuel Jr.; p. 275.

0606 Personnel scheduling

Improving work methods on the New York City aids hotline; LaForge, Stephen S.; p. 213.

0607 Personnel selection

Effective ways to screen and match workers for physically demanding jobs; Mital, Anil, Genaidy, Ashraf M., Asfour, S.S.; p. 109.

Ergonomic job design in manual material handling; Genaidy, Ashraf M, Bafna, K.M., Asfour, S.S.; p. 115.

Optimal selection of operators for assembly line work stations; Hosein, Robert W.; p. 132.

0608 Safety and health

Ergonomic job design in manual material handling; Genaidy, Ashraf M, Bafna, K.M., Asfour, S.S.; p. 115.

0700 INCENTIVE PLANS

Linking the planning, measurement and rewards for individual, group and organizational performance; Pineda, Tony J., Coleman, Garry D., Menon, Hari; p. 303.

VAMC Chillicothe incentive award methodology; Allard, Dale A., Jones, Dewey, Schofield, Larry F.; p. 483.

0701 Group

Just-in-time and wage incentive plans; Niles, John L.; p. 233.

0703 Special types

Assuring success of improshare; Fein, Mitchell; p. 260.

Compensation management systems in the organization of the future: the role of gainsharing; Sink, D. Scott, Rossler, Paul E.; p. 254.

Implementing gainsharing in a total quality management environment; Fargher, John S.W. Jr., Gartman, J.B.; p. 325.

0800 INDUSTRIAL ENGINEERING

Corporate competitiveness: an opportunity to change the industrial engineer's role; Stevenson, Elizabeth M.; p. 291.

The evolution of industrial engineering in the organization; Ungar, Michael J.; p. 309.

0803 Consulting

Labor management relations of modern IE practice-lessons and guidelines from the TVA experience; Bontadelli, James A.; p. 249.

0806 IE management

People involvement and team approach sells management on engineering solutions; Siebeneicher, Paul Robert 2nd; p. 57.

0900 INDUSTRIES

0901 Financial

Productivity and quality in the branch of the future; Shurig, Thomas J., McDonell, Edwin D., Hill, Arthur V., Albers, John E.; p. 197.

Quality control of professional work; Dorfmont, Linda; p. 195.

1000 MANAGEMENT

Business growth and survival: what are the critical success factors?; Kunak, Denny V.; p. 313.

Manufacturing's look at competitiveness; Bockerstette, Joseph A.; p. 567.

Participative management in action; Kulish, John C.; p. 265.

Performance tune-up—a participative approach to corporate performance improvement; Kozik, Douglas W., Robertshaw, Susan O.; p. 539.

1001 Administration

A "productivity engineering" approach to select and run a business profitably; Sumanth, David J., Gonzalez, Cesar; p. 333.

The mission statement: key to operations improvement; Dorfmont, Linda; p. 3.

1003 Decision making

Design of an intelligent micro-DSS for forecasting; Chu, Chao-Hsien, Wang, Hsu-Pin (Ben); p. 413.

Economic analysis in the context of incomplete knowledge; Lee, Ted S., p. 95.

Microcomputer software to support non-traditional economic analyses; Hodge, George L., Canada, John R.; p. 89.

Mutually exclusive alternatives by clustering; Mooney, Edward L., Ross, Terry; p. 101.

People involvement and team approach sells management on engineering solutions; Siebeneicher, Paul Robert 2nd; p. 57.

1005 Management development

Production improvement: the shared responsibility of worker and manager; Cox, John Lew, Hyder, Debra A.; p. 243.

Value adding management: the strategy for continual improvement; Dean, Robert S.; p. 237.

1006 Organization

The mission statement: key to operations improvement; Dorfmont, Linda; p. 3.

1007 Project management

Achieving a competitive manufacturing advantage through effective multi-project management; Boznak, Rudolph G.; p. 285.

How to guarantee CIM project management success; Smith, Dale A.; p. 6.

Redesigning the future; Landen, Delmar L.; p. 241.

1100 MATERIAL HANDLING

1105 Dispatching, scheduling

Simultaneous fleet sizing and routing of bank couriers; Malmborg, Charles J., Simons, Gene R.; p. 204.

1106 Industrial trucks

Computer integration of automatic guided vehicle systems; Landers, Thomas L., Whitt, Walter A., Ogle, Michael K.; p. 165.

1107 Methods and systems design

AGV flow path design and load transfer point location; Usher, John S., Evans, Gerald W., Wilhelm, Mickey R.; p. 174.

General Electric: a case study in materials handling system design; Gabbert, Paula S., Brown, Donald E.; p. 153.

1111 Storage, warehousing

A comparison of high bay storage alternatives; Brooks, Kenneth M. Jr.; p. 47.

On allocating storage space in production line systems with phase-type distributed operation times; So, Kut C., Hillier, Frederick S.; p. 525.

1200 METHODS ENGINEERING

1201 Automation, mechanization

A knowledge-based interface for data translation; Usher, John M., Graves, Gerald R., LeClair, Steven R.; p. 42.

A pattern directed inference approach to decision automation in hardwood log breakdown planning; Occena, Luis G., Tanchoco, Jose M.A.; p. 507.

Knowledge requirements for modeling telerobotic environment as a man-machine system; Ntuen, Celestine A., Sliwa, Nancy O.; p. 138.

1203 Energy conservation

Energy management at Walt Disney World; Allen, Paul J.; p. 77.

Industrial lighting economics of retrofit options; Mallik, Arup K., Singh, Harmohindar, Kramer, Donna K.; p. 80.

1204 Identification systems

Automated dimension verification by point pattern matching; Griffin, Paul M., Foster, Joseph William III, Han, Min-Hong; p. 451.

1205 Manufacturing engineering

Application of artificial intelligence concepts to automated manufacturing system control; Watford, Bevlee A., Davis, Robert P.; p. 401.

How to guarantee CIM project management success; Smith, Dale A.; p. 6.

The IE's: integration engineers for the integrated factory floor; Robbins, James H. Jr.; p. 13.

The use of clustering techniques in manufacturing cellular formation; Chu, Chao-Hsien, Pan, Peiching; p. 495.

Tool management in automated manufacturing: operational issues and mathematical models; Seidmann, Abraham, Kuchinic, Ann E.; p. 379.

1206 Materials conservation

An integrated approach to FMS production planning; Chen F. Frank, Ventura, Jose A., Leonard, Michael S.; p. 512.

1207 Metrication

Computer aided process planning (CAPP) implementation in a FMS; Srihari, K., Greene, Timothy J.; p. 519.

1211 Value analysis, engineering

Value analysis/value engineering/value management; Spengler, Manfred L.; p. 227.

1300 QUANTITIVE METHODS

A multi-objective two stage approach to the design of communication network for computerized manufacturing systems; Gupta, Tarun; p. 501.

Assignment of priorities in a queueing system with dynamic priority discipline; Chandra, M. Jeya, Negrete, Carlos, J.; p. 365.

Methods and applications of aggregation in operations research; Rogers, David F., Evans, James R.; p. 341.

1301 Mathematical models

The periodic loading problem: formulation and heuristics; Dror, Moshe, Schweitzer, Paul J., Trudeau, Pierre; p. 353.

1302 Networks

AGV flow path design and load transfer point location; Usher, John S., Evans, Gerald W., Wilhelm, Mickey R.; p. 174.

1303 Programming: linear, nonlinear

Multicriteria vehicle scheduling problems with probabilistic demands at stations; Koelling, C. Patrick, Park, Yang B.; p. 347.

Multifacility transportation location problem with rectilinear distances; Rajasekers, Jay R., Fang, Shu-Cherng; p. 170.

1305 Simulation/games

A survey of research studies of just-in-time production system using simulation; Chu, Edward Kui-Ming; p. 388.

Intelligent simulation environments for systems modeling; Khoshnevis, Behrokh, Austin, Wanda M., Chen, An-Pin, Chen, Qing-Mei; p. 25.

Introducing simulation as a decision support system in an electronic manufacturing facility; Villeneuve, Laurent, Hassen, Mohamed Ali; p. 68.

1306 Applied probability

Applying fuzzy set theory in the development of quality control charts; Wang, Jyh-Hone, Tzvi, Raz; p. 30.

Knowledge preanalysis for manufacturing systems layout; Montreuil, Benoit, Stump, Daniel J.; p. 180.

1400 PRODUCTION AND INVENTORY CONTROL

1403 Inventory control

Integrated logistics in retailing; Cunningham, David W., p. 471.

1404 Materials management

A survey of research studies of just-in-time production system using simulation; Chu, Edward Kui-Ming; p. 388.

Issues in just-in-time production system; Changchit, Chaweng, Terrell, M. Palmer; p. 360.

JIT—how do you spell that?; Blizard, Mark; p. 424.

Just-in-time and wage incentive plans; Niles, John L.; p. 233.

1407 Production planning

A hierarchical system for scheduling and near real-time control of material flow in flexible assembly; Graves, Robert J.; p. 147.

Data transfer for a nuclear power plant integrated schedule program; Cevenini, R. Mauro; p. 548.

1500 QUALITY CONTROL

1502 Quality control

Applying fuzzy set theory in the development of quality control charts; Wang, Jyh-Hone, Tzvi, Raz; p. 30.

Quality control of professional work; Dorfmont, Linda; p. 195.

Statistical setup adjustment (SPC for small batch machining); Chu, Yen, Lill, Melvin H., Chung, Ken; p. 456.

The building blocks of customer service quality; Frampton, W. Coby; p. 189.

The design of a knowledge based quality information system; Alexander, Suraj M.; p. 21.

1503 Reliability

A prototype expert system for diagnosing machine tools; Eneyo, Emmanuel S., Barash, Moshe M., Talavage, Joseph J.; p. 439.

Integrating reliability in design and manufacturing; Landers, Thomas L., Robinson, David G.; p. 445.

Reliability growth modeling; Lamberson, Leonard R.; p. 433.

1600 WORK MEASUREMENT

A prototype expert system for computerized work measurement; Ramcharan, David J., Martin-Vega, Louis A.; p. 578.

Ergonomic considerations of predetermined motion time systems; Genaidy, Ashraf M., Bafna, K.M., Khalil, T.M., Asfour, S.S., Zandin, K.; p. 584.

Is your restaurant labor management system effective?; Erickson, James P.; p. 465.

Knowledge based work improvement system; Hosni, Yasser A.; p. 564.

Multifactor productivity measurement at the plant level; Aldrich, David W.; p. 294.

Productivity measurement: a situational approach; Shin, Seung-il, Riel, Phillipe F., Sink, D. Scott; p. 555.

Work measurement made easy; Lund, Robert L.; p. 561.

1608 Standards development

Effects of assigning progressively harder production standards with feedback on worker productivity in a repetitive manufacturing task; Das, Biman, Shikdar, Ashraf A.; p. 121.

1610 Work sampling

Analysis of work measurement data using the restraint techniques; Shell, Richard L., Damachi, Nicholas A., Okogbaa, O. Geoffrey; p. 571.

Work sampling proves useful in quality cost measurement; Batson, Robert G.; p. 373.

1611 General

Improving work methods on the New York City aids hotline; LaForge, Stephen S.; p. 213.

Quality control of professional work; Dorfmont, Linda; p. 195.

The building blocks of customer service quality; Frampton, W. Coby; p. 189.

1700 DATA PROCESSING SYSTEMS DESIGN

Knowledge based expert systems in operations management; Weerasekera, Gamini; p. 407.

1703 Analysis techniques

An expert system for a design application; Lin, Ming-Chyuan, Chang, C. Alec, Leonard, Michael S., Occena, Luis G.; p. 36.

How to guarantee CIM project management success; Smith, Dale A.; p. 6.

Initiating and managing expert systems projects; Badiru, Adedeji B.; p. 320.

Knowledge based expert systems role in the factory of the future; Edosomwan, Johnson A.; p. 48.

Knowledge based system for machine layout (KBML); Kusiak, Andrew, Heragu, Sunderesh; p. 159.

Proto-type expert system for job scheduling in flexible manufacturing; Dagli, Cihan H., Cihangirli, Mihriban; p. 418.

The IE's: integration engineers for the integrated factory floor; Robbins, James H. Jr.; p. 13.

1704 Information retrieval

A knowledge-based interface for data translation; Usher, John M., Graves, Gerald R., LeClair, Steven R.; p. 42.

TORONTO
INTERNATIONAL INDUSTRIAL ENGINEERING CONFERENCE
MAY 14-17, 1989

Proceedings: 1988 Fall Industrial Engineering Conference

St. Louis, MO, October 30-November 2, 1988

Subjects (coded) and titles

0100 COSTS

0104 Cost reduction programs

Assessing the true cost savings associated with just-in-time inventory policies; Malstrom, Eric M.; p. 141.

Building energy management popular ideas for profit improvement; Turner, Wayne C., Wong, Jorge B., Duffer, Mark; p. 236.

0105 Productivity

Developing an information base for measuring nursing unit productivity; Omachonu, Vincent K., Nanda, Ravinder; p. 231.

Employee involvement does increase productivity; Clarke, Richard "Dick", Mayberry, B.R. "Bill"; p. 355.

Excellence in productivity through partnerships; Morey, Carl R.; p. 261.

Implementation! getting the cobwebs off your productivity ideas; Forbes, Lincoln H.; p. 220.

Productivity considerations for printed circuit card assemblies; Bao, Han P.; p. 61.

The evolution of productivity in the service sector; Sullivan, Dennis B.; p. 246.

The role of senior management in office knowledge-work performance improvement; Bumbarger, Bruce; p. 364.

Total-factor productivity measurement: theoretical and methodological issues; Pineda, Antonio J.; p. 225.

0200 EMPLOYEE RELATIONS

0202 Collective bargaining

A strategy for union/management negotiations; Boers, Thomas J.; p. 99.

0205 Job evaluation

Application of ergonomic data in job evaluation and incentive schemes; Dutta, S.P.; p. 201.

0300 ENGINEERING ECONOMICS

Depreciation and tax policies in China and the four little dragons; Fleischer, Gerald A., Leung, Lawrence C.; p. 314.

0303 Investment analysis

Analytic Hierarchy process for justification of flexible manufacturing systems; Wabalickis, Roger N., Ghosh, Biman K.; p. 298.

0304 General

The economic justification of investments in advanced manufacturing; Soni, Ramesh G., Liles, Donald H., Stevens, Gladstone T., Jr.; p. 66.

0400 FACILITIES PLANNING, DESIGN

Improving customer service and retail productivity through effective layout and design; Ferguson, William E.; p. 215.

Seating configuration problem; Coll, Ileana M., Martinez, Juan R., Kang, Keebom; p. 251.

0405 Plant layout analysis

A comparative study of serial and parallel arrangements of flexible workstations; Tofang-Sazi, Karim, Ventura, Jose A.; p. 38.

Simulation of a PCB facility for redesign; Kimbler, D.L., Morse, Robert; p. 137.

0600 HUMAN ENGINEERING

0605 Motivation

Worldwide cultural effects on motivation; Sellie, Clifford N.; p. 104.

700 INCENTIVE PLANS

Application of ergonomic data in job evaluation and incentive schemes; Dutta, S.P.; p. 201.

0800 INDUSTRIAL ENGINEERING

0806 IE management

Changing the IE's role for a participative environment; McManus, Kevin R.; p. 82.

Re-examinging the role for industrial engineerng; Lake, Maurice A.; p. 77.

0808 General

Data flow diagrams: a tool for the modern industrial engineer; Byrkett, Donald L. Haddad, David C.; p. 19.

0900 INDUSTRIES

0903 Health care and other services

Developing an information base for measuring nursing unit productivity; Omachonu, Vincent K., Nanda, Ravinder; p. 231.

0904 Manufacturing

Computer networks in manufacturing; Sullivan, William G.; p. 304.

Excellence in manufacturing is people-intensive!; Burnham, John M.; p. 119.

How big is CIM?; Fabbricino, Anthony; p. 3.

Productivity considerations for printed circuit card assemblies; Bao, Han P.; p. 61.

The economic justification of investments in advanced manufacturing; Soni, Ramesh G., Liles, Donald H., Stevens, Gladstone T., Jr.; p. 66.

0906 Others

Better management of the supply chain in support of JIT manufacturing operations; Ferguson, Neil, Baxter, Lynne F., Neil, George C., Macbeth, Douglas K.; p. 169.

Improving customer service and retail productivity through effective layout and design; Ferguson, William E.; p. 215.

JIT: the process industry challenge; Thompson, William F., III; p. 166.

The evolution of productivity in the service sector; Sullivan, Dennis B.; p. 246.

1000 MANAGEMENT

Employee involvement: two by two; Hauck, Warren C.; p. 92.

Excellence in manufacturing is people-intensive!; Burnham, John M.; p. 119.

Just-in-time; the customer/supplier link; Nicoll, Andrew D.; p. 160.

Managing technology direction for the future; Edosomwan, Johnson A.; p. 335.

Policy management: a perspective on Japanese practice; Aswad, Adnan; p. 73.

The role of senior management in office knowledge-work performance improvement; Bumbarger, Bruce; p. 364.

Worldwide cultural effects on motivation; Sellie, Clifford N.; p. 104.

1003 Decision making

Decision making in an imprecise environment; Klein, Cerry M., Tseng, Tsueng-Yao, Leonard, Michael S.; p. 292.

1004 Information systems

Hierarchical objectives in systems analysis; Spearman, Mark L., Hopp, Wallace J.; p. 9.

IE/systems technology and computer integrated manufacturing management systems; Liberty, Soter G. (Art); p. 87.

Visualizing a four level structure of network management information; Rucker, Rob, Billo, Richard E.; p. 310.

1100 MATERIAL HANDLING

The integration of shop floor controls and material handling; Baughman, Michael, Scott, Tony; p. 327.

1109 Principles, analysis

Hands: the weak link in material handling productivity; Rodrigues, Clarence C., Flynn, Joseph F.; p. 359.

1200 METHODS ENGINEERING

1201 Automation, mechanization

A comparison of manual and automated assembly methods; Mital, Anil, Mahajan, Alok, Brown, Max L.; p. 206.

A model for selecting and evaluating flexible automation systems; Parsaei, Hamid R., Wilhelm, Mickey R.; p. 341.

Computer aided process planning taxonomies; Wang, Hsu-Pin

(Ben), Wysk, Richard A.; p. 49.
Computer networks in manufacturing; Sullivan, William G.; p. 304.
Guidelines for successful automation; Wygant, Robert M.; p. 332.
The successful integration of artisans and automation—a case study; Vassallo, Helen G., Hohlmaier, Karl; p. 111.
XPLAN-R: an expert process planning system for rotational components; Zhnag, Hongchao, Alting, Leo; p. 54.

1202 Computer control

A state of an art survey for expert systems in process planning; Gupta, Tarun; p. 269.
How big is CIM?; Fabbricino, Anthony; p. 3.
Integrating manufacturing technology, system design and operating-control methodology; Vargas, Gus A.; p. 13.

1203 Energy conservation

Building energy management popular ideas for profit improvement; Turner, Wayne C., Wong, Jorge B., Duffer, Mark; p. 236.

1205 Manufacturing engineering

A comparative study of serial and parallel arrangements of flexible workstations; Tofang-Sazi, Karim; Ventura, Jose A.; p. 38.
A knowledge based approach to assembly planning analaysis; Occena, Luis G., Chin, Jui-Hsi; p. 287.
Adjusting to just-in-time requirements; Hill, Ian D.; p. 150.
Analytic Hierarchy process for justification of flexible manufacturing systems; Wabalickis, Roger N., Ghosh, Biman K.; p. 298.
Computer aided process planning taxonomies; Wang, Hsu-Pin (Ben), Wysk, Richard A.; p. 49.
Covering technique based algorithm for machine grouping to form manufacturing cells; Balasubramanian, K.N., Panneerselvam, R.; p. 31.
Designing GT cells enhanced by group scheduling: key to flexible manufacturing system; Al-Qattan, Ibrahim; p. 25.
How big is CIM?; Fabbricino, Anthony; p. 3.
IE/systems technology and computer integrated manufacturing management systems; Liberty, Soter G. (Art); p. 87.
Integrated manufacturing production systems; Black, J.T.; p. 125.
Integrating manufacturing technology, system design and operating-control methodology; Vargas, Gus A.; p. 13.
J-I-T feasibility: a simulation study; Martin, David L., Markiewicz, Theresa M.; p. 132.
JIT and the small manufacturer; Schmidt, Peter J.; p. 156.
Strategic JIT: making the transition from fad to successful long-term solution; Cramer, Michael A.; p. 147.
The query decomposition process for computer integrated manufacturing systems; Triantis, Konstantinos P.; p. 281.
XPLAN-R: an expert process planning system for rotational components; Zhang, Hongchao, Alting, Leo; p. 54.

1209 Process design

Computer aided process planning taxonomies; Wang, Hsu-Pin (Ben), Wysk, Richard A.; p. 49.
XPLAN-R: an expert process planning system for rotational components; Zhang, Hongchao, Alting, Leo; p. 54.

1210 Research

A decision architecture for the statistical control of small batch processes; Ford, Roger G., Liles, Donald H.; p. 275.
A knowledge based approach to assembly planning analysis; Occena, Luis G., Chin, Jui-Hsi; p. 287.
A state of an art survey for expert systems in process planning; Gupta, Tarun; p. 269.
The query decomposition process for computer integrated manufacturing systems; Triantis, Konstantinos P.; p. 281.

1213 Work design, methods improvement

A PC software package for the optimal design of workplace layout and line balancing; Choon, Ho Nai, Ek, Lim Teow; p. 190.

1214 Work analysis techniques

Ergonomics and robot selection; Wygant, Robert M., Genaidy, Ashraf M.; p. 196.

1300 QUANTITATIVE METHODS

1301 Mathematical models

A time series approach for computer-aided quality control; Liu, Tien-I; p. 44.
Covering technique based algorithm for machine grouping to form manufacturing cells; Balasubramanian, K.N., Panneerselvam, R.; p. 31.

1303 Programming linear, nonlinear

Simplicial decomposition and dual methods for nonlinear networks; Ventura, Jose A.; p. 320.

1305 Simulation/games

J-I-T feasibility: a simulation study; Martin, David L., Markiewicz, Theresa M.; p. 132.
Simulation of a PCB facility for redesign; Kimbler, D.L., Morse, Robert; p. 137.

1400 PRODUCTION AND INVENTORY CONTROL

1403 Inventory control

Adjusting to just-in-time requirements; Hill, Ian D.; p. 150.
Assessing the true cost savings associated with just-in-time inventory policies; Malstrom, Eric M.; p. 141.
Better management of the supply chain in support of JIT manufacturing operations; Ferguson; Neil, Baxter, Lynne F., Neil, George C., Macbeth, Douglas K.; p. 169.
JIT and the small manufacturer; Schmidt, Peter J.; p. 156.
JIT: the process industry challenge; Thompson, William F., III; p. 166.
Strategic JIT: making the transition from fad to successful long-term solution; Cramer, Michael A.; p. 147.

1404 Materials management

Just-in-time: the customer/supplier link; Nicoll, Andrew D.; p. 160.

1405 Production control

Designing GT cells enhanced by group scheduling: key to flexible manufacturing system; Al-Qattan, Ibrahim; p. 25.

1407 Production scheduling

A decision architecture for the statistical control of small batch processes; Ford, Roger G., Liles, Donald H.; p. 275.
The integration of shop floor controls and material handling; Baughman, Michael, Scott, Tony, p. 327.

1500 QUALITY CONTROL

Quality improvement—a way of business for FPL and its vendors; Mitchell, Charles J.; p. 255.

1501 Inspection

Component inspection study using the corneal reflection eye tracker; Kunak, Denny V., Beetley, Dale E., Heusack, Linda L., Foster, Sandra M.; p. 183.
Eye-movement studies: a means to improving inspection efficiency and output quality; Kunak, Denny V.; p. 243.

1502 Quality control

A time series approach for computer-aided quality control; Liu, Tien-I; p. 44.
Eye-movement studies: a means to improving inspection efficiency and output quality; Kunak, Denny V.; p. 243.
On-line and off-line quality control; Hool, James N.; p. 175.

1600 Work measurement

Performance to standard and other obsolete measurements; Harrison, Jack B.; p. 181.

1700 DATA PROCESSING SYSTEMS DESIGN

Technology transfer issues-what is it? What parameters identify it?; Swift, Fred W., Swift, Jill A.; p. 347.

1703 Analysis techniques

Data flow diagrams: a tool for the modern industrial engineer; Byrkett, Donald L., Haddad, David C.; p. 19.
Hierarchical objectives in systems analysis; Spearman, Mark L., Hopp, Wallace J.; p. 9.

1705 General

A PC software package for the optimal design of workplace layout and line balancing; Choon, Ho Nai, Ek, Lim Teow; p. 190.
Managing technology direction for the future; Edosomwan, Johnson A.; p. 335. IE